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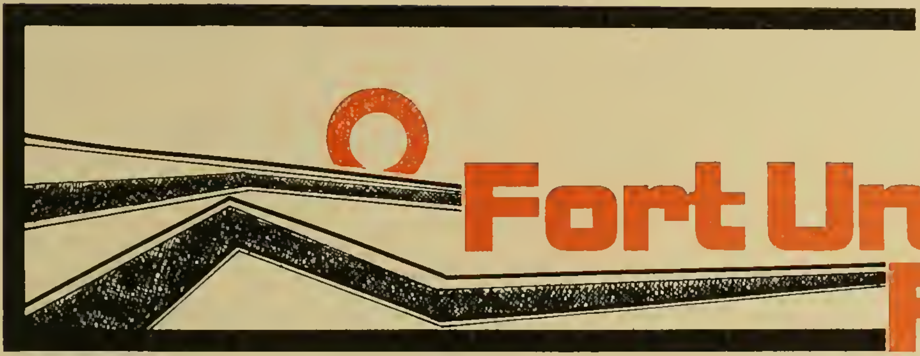

Fort Union Regional Task Forces

Legislative Handbook on Energy-related Topics

STATE DOCUMENTS

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PREFACE

Included in this handbook is an enumeration of the topics covered by the seven Fort Union Regional task forces as well as task force membership, energy-related information sources, and glossary of energy-related terms. For detailed information contact task force members, legislative research agencies, or project coordinator.

INTRODUCTION

With partial support from the National Science Foundation, the four states of North Dakota, South Dakota, Montana and Wyoming have created seven task forces to study the interstate effects of the development of the Fort Union Coal Formation which underlies parts of each of these states.

The task forces include key legislators, executive branch personnel, academicians, representatives of Indian tribal nations, and citizens representing the general public of each state. Federal and regional information sources are used to obtain current energy environmental data.

Topics of common concern facing the groups included air quality, water quality, water allocation, plant siting, energy development, reclamation, taxation, and social and economic impact. The task forces examined methods to assist member states in problem solving as well as acquainting the members with the energy development positions and accompanying laws and regulations of their sister states.

In sum, these task forces are special interim committees serving to provide each member state with the information and materials necessary for sound policy decisions relative to energy environmental issues during the 1977 Legislative Session.

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The Common Data Element and Information Exchange Task Force developed an interstate information exchange system on legislative actions during the legislative sessions in each of the four states. The information exchange function will be coordinated by the legislative service agency of each Fort Union state. The legislative service agencies will act as the central contact for the distribution of energy-related legislation for their state. This information exchange will function in the following manner:

1. The title and author of all energy-related bills will be exchanged among the Fort Union states prior to the beginning of the legislative sessions.

2. The title and author of all energy-related bills will be exchanged among the Fort Union states each week until the filing deadline.

3. At the end of the legislative session, all energy-related bills and the disposition of such bills will be exchanged among the Fort Union states.

The Common Data Element and Information Exchange Task Force compiled a list of information sources in each of the four states as well as federal and regional agencies. This list is published under "Information Sources" in this reference booklet.

The task force also compiled a list of common data elements and base data elements used in the energy field. Base data elements used in impact statements and common data element definitions are published in the other sections of this booklet.

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After research and study in the areas of coal development in the four states; coal resources in the four states; expected effects of various pollutants; emission standards of the four states; air quality in relation to Indian reservations; comparisons of existing air quality standards in the four states; plant siting regulations as they relate to air quality; significant deterioration of air quality and its impact on land use; possible precipitation changes due to air quality; and the effect of trace elements as an air contaminant; the Fort Union Regional Task Force on Air Quality recommended an interstate committee, appointed by the respective governors and made up of two air quality technicians, one legislator, and one Indian, be formed to address the following concerns: exchange of air quality data; review of present air class designations; review of pending energy development; plan air quality positions; develop comparability and compatibility in air quality parameters measured; encourage continued research on fugitive dust emissions, trace elements, and possible precipitation changes due to energy development; encourage Indian and federal communication with the states; provide readable data for legislative and private use; and rewrite present short-term standards for ambient air quality.

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ENERGY DEVELOPMENT, REGULATION AND PLANT SITING TASK FORCE

The Energy Development, Regulation and Plant Siting Task Force researched in detail the plant siting acts of Montana, North Dakota and Wyoming. South Dakota is now considering such a law. These acts have generally been successful, and their features are compared in the accompanying summary table.

SUMMARY TABLE

A Comparison of Power Facility Siting Laws in Montana, Wyoming, and North Dakota

Provisions of State Acts	Montana	North Dakota	Wyoming
Acts & Dates	Major Facility Siting Act, 1973, 1975	Energy Conversion & Transmission Facility Siting Act, 1975	Industrial Development Information & Siting Act, 1975
Act Applies to	Elect, gas, hydrocarbon, coal fac, uranium enrichment, elect trans. lines, gas, water, liquid hydrocarbon, in-situ coal gasification	Elect, gas, hydrocarbon fac, uranium enrichment, elect, gas, or liquid trans.	Elect, syngas, hydrocarbon fac, uranium enrichment, fac over $50 million
Site Certification Authority	Board of Natural Resources & Conservation	Public Service Commission	Industrial Siting Council
Size & Composition of Authority	Size of the Board	Size of the PSC	7 members appointed by the Governor
Method of Site Acquisition	Cert. of Env. Compatibility & Public Need	Certification of Site Compatibility	Permit
Application Fee	Varies - may exceed $2 million for large fac	Varies - $5,000 to $150,000	Varies - $100,000 max. If additional study is needed, $1 million max.
One Stop Provisions	2 Stop	Yes	No, other agencies retain jurisdiction
Utility Long-Range Plans Required	Annually must submit 10-year plans	Annually must submit 10-year plans and 5-year facility development plans	Annually must submit 5-year plans
Provisions for Act Enforcement	Civil penalty $10,000 - 1 yr. in prison max.	Civil penalty $10,000 max.	Civil penalty $10,000 - 1 yr. in prison max.

ENERGY DEVELOPMENT POLICIES

Montana

Coal, by the process of elimination, is the most plausible source of additional energy to supply the United States. Montana sees coal as a part of the interim energy answer for the nation but also knows the effects of its development cause a number of serious problems for both this region and for Montana. The severity of the problem depends to a significant degree on the rapidity and magnitude of past and future development and on the regional and state ability to shape that development in the interest of the people.

Accomplishments of the state legislature in recent years include accepting the following responsibilities: (1) to minimize negative impacts through regulation of the pace and kind of development, (2) to secure an equitable return for Montana coal, which is to be used to compensate those who must pay the immediate costs of coal development and to ensure the economic stability of the state and well-being of its citizens after fossil fuels are exhausted or no longer desired, and (3) to begin the process of specifying what separate states and the region want for the future.

Montana's position in this regard has already been affirmed in legislation--encouraging investment in nonfossil fuels, promoting energy conservation in buildings, and providing for research, development, and demonstration of alternative energy resources.

North Dakota

The North Dakota legislative energy policy seems to be that of "cautious development". Development is allowed but with controls.

The Governor of North Dakota has set forth the executive energy policy which includes the following 12 points:

1. Adequate time will be allowed to consider all facets of each proposed energy development project and to allow for citizen involvement.
2. Political subdivisions and citizens must not suffer adverse economic impacts as a result of energy development.
3. A percentage severance tax must be adopted.
4. Priorities in the commitment of water must be carefully weighted.
5. All state laws will be adhered to by all energy developers including the federal government.

6. As an energy resource state, North Dakota will work with the nation to help provide national energy needs, but not to supply the nation with energy resources for unnecessary demands.

7. The state must assume prime responsibility for guiding energy development.

8. North Dakota will not authorize utilization of energy technologies which are unlikely to become obsolete in the near future.

9. New jobs in business opportunities created by energy development must be available to North Dakota citizens.

10. The state must maintain a perpetual trust fund through energy-related taxation.

11. North Dakota must provide guidance and incentive for industry to capture and utilize all potential by-products of energy development.

12. Significant size of cultural and scenic importance must be preserved.

South Dakota

The energy development position of South Dakota could be characterized more as an energy consumer as opposed to an energy producer. South Dakota faces the following three policy issues at the present time:

1. Facility siting. No major construction is expected to 1980; however, the interim legislative committee on natural resources is considering draft legislation that would include regulation of power plant siting and transmission and storage siting. The study was directed by House Concurrent Resolution No. 506, which was passed during the 1976 Legislative Session.

2. Water development. Consideration will probably be given to prioritize end use of water. Consideration will also be given to provide public financial assistance for water development through revenue bonds.

3. Conservation. Consideration of various conservation measures which would require legislative authority before becoming effective.

Wyoming

Wyoming's is an energy-oriented economy. In future years, much more activity can be expected toward development of Wyoming's coal resources to help meet the nation's energy needs. Wyoming, through affirmative legislative action, stands prepared to deal with the problems and prospects of energy-related industrial development.

It is likely that over time some modifications to existing laws or addition of new legislation may be in order. For the present, the Wyoming legislature believes it has looked at the problem, attempted to forecast needs and has provided suitable remedial legislation.

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RECLAMATION AND LAND USE TASK FORCE

The task force recommended that interstate contact and discussion continue on the issue of land reclamation and use. Land use per se was not dealt with by the task force.

Following are comparisons of the provisions of the state's reclamation laws.

STATE STATUTORY REQUIREMENTS
REGARDING THE REHABILITATION OF SURFACE MINED LAND

Components of the Regulation	Montana	North Dakota	Wyoming	South Dakota
Effective Date of Current Law	3/14/73 (Amended 3/14/74 and 3/31/75)	1/1/70 (Amended 7/1/73 and 4/8/75)	7/1/73 (Amended 3/12/75 and 3/1/76)	7/1/71 (Amended 3/10/73 and 3/28/75)
Operations Exempted from the Law	10,000 cu. yds. removed; any political subdivision or agency of the state exempt from certain provisions	none (however <10 ft. cu. yds./ 36 mos. or 1 ac/ 36 mos. subject to special provisions)	Mining of sand or gravel 5 ac or less (however 4,000 tons overburden removed or 2 ac/yr. exempt from certain provisions)	none (however, 1,000 tons or less removal of minerals per year, publicly owned lands, and pegmatite mines removing 2,000 tons or less of minerals per year exempt from certain provisions)
Lands Protected from Mining	Unique values; if unreclaimable; must area strip	Unique values; if unreclaimable	Unique values; if unreclaimable	Unique values; if unreclaimable
"Affected Land" Includes Access Roads and Railroads	yes	no	yes	yes
Specific Provisions for:				
Baseline Studies	no	yes	yes	no
Monitoring	yes	yes	yes	yes
Research	yes	yes	yes	yes

Components of the Regulation	Montana	North Dakota	Wyoming	South Dakota
Rehabilitating mines abandoned before or after enactment of the law	yes	yes	yes	yes
ADMINISTRATIVE SANCTIONS				
Suspension or Cancellation of Permit	yes	yes	yes	yes
Reinstatement Possible	yes	no (must cease other mining activities within the state within 30 days of forfeiture)	yes	yes
Denial of subsequent permits to operate	repeated violations	yes	yes	yes
MINING PERMIT REQUIREMENTS				
Permit Term	1 year	3 yrs. (extendable by 2 yrs.) and 3 yrs. to rehabilitate	life of project	1 year
Submitted to Which Agency	Dept. of State Lands	Public Service Commission	Dept. of Environmental Quality Act - Land Div.	State Conservation Commission

Components of the Regulation	Montana	North Dakota	Wyoming	South Dakota
Information Concerning Operator's Past History Required	yes	no	yes	no
Baseline Studies Required	yes	yes	yes	no
Mining Plan Required	yes	yes	yes	no
Rehabilitation Plan Required	yes	yes	yes	yes
Monitoring Plan Required	no	no	yes	no
Intended Land Use Plan Required	yes	yes	yes	yes
Provisions for Public Survey	yes	yes	yes	no
REGULATORY MEASURES				
Regulatory Agency	Dept. of State Lands	Public Service Commission	Dept. of Environmental Quality Act - Land Div.	State Conservation Commission
Regulations Primarily Set by	State, agency commissioner	Statute	Statute and Agency	Agency
Provisions for Monitoring to be Performed by the Agency	yes	yes	yes	yes

Components of the Regulation	Montana	North Dakota	Wyoming	South Dakota
Reports Required from the Operator to the Agency				
Annual	yes	yes	yes	yes
On Completion of Mining Operation	no	no	no	no
On Completion of Grading and Shaping	yes	no	no	no
On Completion of All Obligations	no	no	no	no
REHABILITATION REQUIREMENTS				
Collection of Baseline Data	no	no	no	no
Monitoring	no	no	yes	no
Specified Commencement of Rehabilitation	as soon as possible	no	earliest possible time	as soon as possible
Specified Completion of Rehabilitation	Before machinery is removed from operation site	Within 3 yrs. of expiration of permit (extendable by 2 yrs.)	no	no
Is the Best State-of-the-Art Technology Required	yes	no	yes	no

Components of the Regulation	Montana	North Dakota	Wyoming	South Dakota
Is Compensation for Loss of Water Considered	yes	yes	yes	Left to discretion of Agency
Grading and Shaping	To original contour of the land; according to proposed future use; no contour mining	To original contour or rolling topography unless defined otherwise by plan for a higher use	To assure (at minimum) highest previous use; to blend into surrounding terrain	According to proposed future use
Slope Restriction of Mining	no	no	no	no
Slope Restriction of Spoils	To approximate contour of the land; 20°	Final cut 35° to permit transverse by farm machinery	no	no
Drainage Considerations	yes	yes	yes	Left to discretion of Agency
Aesthetic Considerations	no	yes	no	yes
Topsoil Requirements	yes	5 ft. where available if not, as much as possible	yes, unless other types of soil are superior	as determined by agency
Burial of Toxic Materials	yes	no	yes	no

Components of the Regulation	Montana	North Dakota	Wyoming	South Dakota
Revegetation	Permanent cover, diverse cover, self-regenerating to at least quality and quantity before mining	According to rehabilitation, plan must be perennial or annual crop species	Native or superior, self-regenerating vegetation; planted on the contours	As determined by agency
Period of Time to Evidence Vegetative Stability	At least 5 yrs.	no	At least 5 yrs.	no
Public Notice Before Bond Release	yes	no	no	no
Bonding	Bond shall not be less than $200 nor more than $2,500 per acre affected	Permit application must be accompanied by $1,500 per acre bond. PSC may require larger bond	Bond shall not be less than $10,000 nor less than $200 per affected acre	Permit application must be accompanied by bond in the amount of the cost of reclamation

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SOCIAL AND ECONOMIC IMPACT TASK FORCE

From reports given by the social and economic impact panel to the Fort Union Coal Conference in October, 1975, it was evident that social and economic problems were arising from the rapid development of coal in the northern plains states. Such problems included the sudden need for new services and facilities and the accompanying need for front-end financing to supply these services and facilities, inadequate expertise to plan properly, changes and problems of fixed income consumers, and changing social structures. Topics discussed related to recognition of impacted areas, assistance to impacted areas, and assessment of social and economic impact. Within these discussion areas the task force conferred on social and economic issues of energy development relating to population growth, transportation, communication, interstate impacts, and predevelopment impacts.

A major opinion of the task force was that the present severance tax levels are adequate to cover impact costs. However, there are problems of timing and allocation of those severance tax funds.

One general conclusion emerging from this task force was that it appears difficult if not impossible to define and evaluate social and economic problems dealing with impacted areas.

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TAXATION OF ENERGY RESOURCES TASK FORCE

The Taxation of Energy Resources Task Force membership realized that the philosophies of the four states relative to taxation of coal resources are vastly different, but feel it necessary to have the project coordinator monitor changes in the laws of each of the four states, as well as any federal legislation which would change state policies.

The Taxation Task Force recognized the following as current legislative problems to be dealt with: taxation of water, taxation of mineral rights, taxation of Indian coal, taxation policies as seen by industry people, and taxation changes possible with changes on the federal level.

Following are two comparison charts related to taxes imposed, rates, and distribution of taxes collected for the four states.

FORT UNION REGIONAL TASK FORCE ON TAXATION OF ENERGY RESOURCES

DESCRIPTION	NORTH DAKOTA	SOUTH DAKOTA	MONTANA	WYOMING
General fund net receipts FY76 (estimate)	$234,000,000	$157,294,570	$485,000,000	$114,739,840
Net receipts from coal extraction tax FY76 (estimate)	5,869,841	-0-	58,900,000	3,297,630
From coal extraction tax as % of general FY76 fund revenue	2.5%	-0-	12.14%	2.9%
Number of applications for coal gasification plants	2 (one of which has been denied a water permit to date)	None	None	2 pending on federal government loan guarantees
Total number of applications to mine coal	32	None	Each mine must obtain a permit yearly. There are presently 7 mines.	11
Tax value	Approximately 53¢ per ton at present (tied to price index). Flat rate at point of severance		Value means contract sales price. In practice, all values have been derived using actual sales prices	Determined by subtracting from the sales price any costs of benefication, transportation costs from point of first storage to destination and any state or federal royalties
Number of applications for electrical generating plants	2 (under construction) and 2 (proposed)	1	1	3 plus one other possible site

DESCRIPTION	NORTH DAKOTA	SOUTH DAKOTA	MONTANA	WYOMING
Impact of taxes on coal production	May keep small firms from applying		Unable to document anything	
Companies applied then withdrawn	None	None	None	None
Projected coal extraction (million tons)				
FY77	11	0	34.22	50.4
FY78	13.5	0	39.22	72.0
FY79	13.5	0	39.62	88.2
FY80	13.5	0	42.82	104.9
FY81	18.5	0	Not available	106.4
FY82	21.1	0	Not available	112.5
FY83	29.7	0	Not available	113.9
FY84	29.7	0	Not available	116.7
FY85	29.7	0	Not available	117.7
(Income) license tax	Up to $3,000 - 3% $3,000-$8,000 - $90 + 4% $8,000-$15,000 - $290 + 5% over $15,000 - $640 + 6%	None	6 3/4% on adjusted federal tax	None
General Property Tax	50% of taxable value	Subject to local tax rates	Gross proceeds of underground mines taxed at 33 1/3% and strip mines at 45% of value	100% of value
Severance Tax	50¢ per ton increasing 1¢ for every 3 point increase in the wholesale price index	4% of net profit	under 7000 BTU - 20% 7000 BTU and over - 30%	4% of value increasing .4% - 1974 .8% - 1975 1.2% - 1977 1.6% - 1978 and after

DESCRIPTION	NORTH DAKOTA	SOUTH DAKOTA	MONTANA	WYOMING
Trust Account			$25 plus 1/2 of 1% of gross value if over $5,000	
Corporation Privilege Tax	1% of net income over $2,000			
Coal Facility Tax	2 1/2% of gross receipts (coal conversion) 25/100 of 1 mill on each kw hour (electrical generating) 10¢ on each 1000 cu. ft. of gas (gasification)			
Franchise Tax				$5 on assets less than $50,000. $50 on assets over $50,000 to $1,000,000 plus $50 for each million dollars of assets
Distribution of Severance Tax	35% Coal Impact Office 35% Trust fund 5% to coal producing counties 25% state general fund	To state general fund	10% school equalization 27 1/2% local impact and education trust 10% coal area highway improvement 4% county where coal is mined 1% counties land planning	2% severance tax on oil, gas, coal and trona distributed 100% to permanent mineral trust fund. 2% tax on all minerals distributed 100% to general fund. Coal excise

DESCRIPTION	NORTH DAKOTA	SOUTH DAKOTA	MONTANA	WYOMING
			2 1/2% alternate energy research 2 1/2% renewable resource development 2 1/2% parks acquisition 40% general fund	tax of 1.2% distributed to fund to aid impacted areas.

SUMMARY OF ANNUAL TAXES ON SURFACE MINING
BASED ON
U.S. BUREAU OF MINES MODELS, SELECTED STATES, 1975-76

	Surface Mine 9.2 Million Ton Annual Production	
State	Total Taxes	Taxes Per Ton
Arizona	$ 4,224,920	$ .46
Colorado	1,458,292	.16
Montana	13,580,680	1.48
New Mexico	2,434,198	.26
North Dakota	4,978,686	.54
Utah	798,307	.09
Wyoming	4,004,700	.43

Source: Western Governors' Regional Energy Policy report, "Taxation of Coal Mining", January, 1975.

TASK FORCE MEMBERS

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North Dakota State University
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Chief Engineer
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Great Falls, MT 59401

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Scobey, MT 59263

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Glendive, MT 59330

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Mr. Wayne Lovercheck
Torrington, WY 82240

SUMMARY

WATER ALLOCATION AND QUALITY PROBLEMS TASK FORCE

The Fort Union Regional Task Force on Water Allocation and Quality Problems had many areas of concern to research and review. A major concern is that of Indian water rights which are entangled in courts. Slurry transportation of coal was reviewed as well as United States-Canadian relations. The task force collected a great deal of information on these issues: (1) the role of the federal government in the allocation of water along the Upper Missouri River Basin; (2) the possibility of future joint planning and allocation of water within the four-state region; (3) consideration of possible changes in water supplies as a result of climatic changes and alteration of future industrial, municipal, and agricultural uses; (4) possible diminution of existing water resources as a result of inadequate planning; (5) the need for each state within the region to establish rights in the Upper Missouri River Basin; (6) the sale of water by the states to commercial enterprises; (7) the need for states within the region to update existing water usage plans and to forecast possible future uses; (8) the value of continuing and accelerating communication between the four states; and (9) quality standards of underground water sources.

The states exchanged information on their present water quality laws and the accompanying rules and regulations, and felt further interstate exchanges of information on water quality and quantity would be of real value.

The task forces asked that continuing funds be applied for and that the North Dakota Legislative Council continue as coordinating entity in order for the four states to maintain, through common effort, their prerogatives over water and water rights.

FEDERAL AND REGIONAL INFORMATION SOURCES

Agricultural Research Service
(each state)

Energy Research and Development Administration
20 Massachusetts Avenue N.W.
Washington, D.C. 20545
202-376-4782

Environmental Protection Agency
1860 Lincoln Street
Suite 900
Denver, CO 80203

Federal Energy Administration
12th and Pennsylvania Avenue
Washington, D.C.
202-961-8408

or

Region VIII
1075 South Yukon
Lakewood, CO 80226
303-234-2596

Missouri River Basin Commission
601 Bismarck Avenue
Bismarck, ND 58501
701-255-4011

Mountain Plains Federal Regional Council
Region VIII
Federal Building
Denver, CO 80202
303-837-2741

Native American Natural Resources Development Fund
840 Insurance Exchange Building
910 - 15th Street
Denver, CO 80202
303-534-4484

Native American Rights Fund
1506 Broadway
Boulder, CO 80302
303-447-8760

Old West Regional Commission
Hedden-Empire Building, Suite 228
Billings, MT 59101
406-657-6665

Southwest Regional Energy Council
3300 West Mockingbird Lane, Suite 507
Dallas, TX 75235
214-358-1254

Western Governors' Regional Energy Policy Office
4730 Oakland Street
Denver, CO 80202
303-371-4280

INFORMATION SOURCES IN NORTH DAKOTA

Agency	Contact for Information
Governor's Energy Office and Natural Resources Council	Dr. Charles F. Metzger Governor's Office State Capitol Bismarck, ND 58505 701-224-2200
Department of Agriculture	Myron Just State Capitol, Bismarck 701-224-2232
Attorney General's Office Environmental Section	Gary Helgeson State Capitol, Bismarck 701-224-2210
Coal Impact Office	Ralph Dewing State Capitol, Bismarck 701-224-3188
Geological Survey	Dr. Ned Noble University of North Dakota Grand Forks, ND 58202 701-777-2110
Health Department Division of Environmental Engineering	Gene Christianson State Capitol, Bismarck 701-224-2374
Health Department Division of Water Supply and Pollution Control	Norm Peterson State Capitol, Bismarck 701-224-2386
Highway Department	Walter Hjelle State Highway Building, Bismarck 701-224-2581
Land Department	Richard Lommen State Capitol, Bismarck 701-224-2801
Legislative Council	John Graham State Capitol, Bismarck 701-224-2916
North Dakota Regional Environmental Assessment Program	Dr. A. William Johnson 316 N. 5th Street - 5th floor Bismarck, ND 58505 701-224-3700

Agency	Contact for Information
Public Service Commission Division of Reclamation and Plant Siting	Ed Englerth State Capitol, Bismarck 701-224-2400
Soil Conservation Service	Gary Puppe State Capitol, Bismarck 701-224-2650
State Planning Division	Austin Engel State Capitol, Bismarck 701-224-2818
Tax Department	Byron Dorgan State Capitol, Bismarck 701-224-3452
Water Commission	Vernon Fahy State Capitol, Bismarck 701-224-2750
Vocational Education	Ted Renner State Capitol, Bismarck 701-224-2259
Indian Lignite Manpower Program	Douglas Myers United Tribes, Bismarck 58501 701-255-3285

INFORMATION SOURCES IN SOUTH DAKOTA

Agency	Contact for Information
State Planning Bureau Section: Planning Information Assistance	Paul Tessar State Capitol Pierre, SD 57501 605-224-3628
Department of Environmental Protection Section: Air Quality, Water Quality	
State Energy Policy Office	James VanLoan State Capitol, Pierre 605-224-3603
Department of Natural Resource Development Section: Water Rights	
South Dakota Geological Survey	Duncan McGregor 624-4471
Department of Labor Section: Division of Employment Security	
Crop and Livestock Reporting Service	John Ranek
Soil Conservation Service	
Bureau of Reclamation	
EROS Data Center Section: Applications Assistance Branch	Dennis Hood 594-6511

INFORMATION SOURCES IN MONTANA

Agency	Contact for Information
Department of Community Affairs Research & Information Systems Division	C. R. Draper, Administrator 449-2896
Montana State Library	Hald Chambers, Documents Librarian 449-3004
Department of Fish and Game Environment and Information Division	James A. Posewitz, Administrator 449-2603
Department of Health and Environmental Sciences	
Environmental Sciences Div.	Benjamin F. Wake, Administrator 449-3454
Air Quality Bureau	Michael D. Roach, Chief 449-3454
Water Quality Bureau	Donald G. Willems, Chief 449-2407
Solid Waste Management Bureau	Terrence Carmody, Chief 449-2821
Department of Highways	
Engineering Division	Jack R. Beckert, Admin. 449-3452
Department of State Lands	Leo Berry, Acting Commissioner 449-2074
Reclamation Division	C. C. McCall, Administrator 449-2074
Legislature	
Environmental Quality Council	John W. Reuss, Executive Director 449-3742
Legislative Council	Rose E. Weber, Executive Director 449-3064

Agency	Contact for Information
Lt. Governor's Office Montana Energy Advisory Council	Bill Christiansen, Lt. Governor 449-3773
Department of Natural Resources and Conservation	Gary Wicks, Director 449-3712
Energy Planning Division	Albert Tsao, Administrator 449-3780
Oil and Gas Conservation Division	Donald Chisholm, Administrator 449-2611
Water Resources Division	Orrin Ferris, Administrator 449-2872
Department of Public Service Regulation	449-3017
Department of Revenue	W. A. Groff, Director 449-2460
Misc. Tax Division - Severance Taxes	Patricia Mehring 449-2465
Department of Social and Rehabilitation Services	Pat Melby, Director 449-3451
Agricultural Experiment Station	J. A. Asleson, Director 994-3681
Montana Bureau of Mines and Geology	S. L. Groff, Director 792-8321 Ext. 245
Energy Division	R. E. Matson, Chief 792-8321 Ext. 351
Bureau of Business and Economic Research	Maxine C. Johnson 243-5113
Environmental Library	William Tomlinson, Director 243-2282

INFORMATION SOURCES IN WYOMING

Agency	Contact for Information
State Planning Coordinator	Mr. David Freudenthal State Planning Coordinator Governor's Office Capitol Building Cheyenne, WY 82001 777-7434
Department of Agriculture	Mr. Larry Bourret Commissioner of Agriculture 2219 Carey Avenue Cheyenne, WY 82001 777-7321
Attorney General's Office	Mr. V. Frank Mendicimo Attorney General Capitol Building, Cheyenne 777-7841
Geological Survey	Dr. Dan Miller State Geologist and Executive Director Box 3008, University Station Laramie, WY 82070 742-2054
Department of Environmental Quality	Robert E. Sundin Department Director Hathaway Building Cheyenne, WY 82001 777-7391
Air Quality Division	Randolph Wood Air Quality Administrator Hathaway Building Cheyenne, WY 82001 777-7391
Land Quality Division	Walter C. Ackerman - Reclamation Land Quality Administrator Hathaway Building Cheyenne, WY 82001 777-7756
Water Quality Division	Arthur E. Williamson Water Quality Administrator Hathaway Building Cheyenne, WY 82001 777-7781

Agency	Contact for Information
State Engineer	George Christopulos State Engineer Barrett Building Cheyenne, WY 82001 777-7318
Public Lands Department	Albert Keen, Commissioner Capitol Building Cheyenne, WY 82001 777-7331
Legislative Service Office	Ralph Thomas, Director Capitol Building, Cheyenne 777-7702
Public Service Commission	Alex J. Eliopulos Chief Counsel at Administrative Secretary Supreme Court Building Cheyenne, WY 82001 777-7427
Department of Economic Planning and Development	John Nialand Executive Director 720 West 18th Street Cheyenne, WY 82001 777-7284
Industrial Siting Office	Dr. Blaine Dinger Director Boyd Building 1720 Carey Avenue Cheyenne, WY 82001 777-7368
Land Use Administration	Dr. James Ahl Executive Director Boyd Building, Cheyenne 777-7493
Revenue and Taxation Department	Rudolph Anselmi, Chairman Tax Commission 2200 Carey Avenue Cheyenne, WY 82001 777-7582
Governor's Interdepartmental Water Conference	George Christopulos State Engineer Barrett Building Cheyenne, WY 82001 777-7318

ENERGY-RELATED TERMS AND DEFINITIONS

Abatement - The method of reducing the degree to intensity of pollution, also, the use of such a method.

Adjacent lands - All lands within one-half mile of the proposed permit area.

Affected land - Land from which overburden is removed, or upon which overburden, development waste or refuse is deposited and access roads, haul roads, mineral stockpiles, mill tailings, impoundment basins, and all other lands whose natural state has been, or will be, disturbed as a result of the operations.

Air contaminant - Any solid, liquid, gas, or odorous substance for any combination thereof.

Air pollution - The presence in the outdoor atmosphere of one or more air contaminants in such quantities and duration as is or may be injurious to human health, welfare, or property, animal or plant life, or which unreasonably interferes with the enjoyment of life or property.

Air quality standard - An established concentration, exposure time, or frequency of occurrence of a contaminant or multiple contaminants in the ambient air which shall not be exceeded.

Ambient air - The surrounding outside air.

Approved reclamation plan - A detailed plan for rehabilitation of disturbed lands which has been approved by the administrator of the appropriate state agency.

Aquifer - An underground bid or stratum of earth, gravel or porous stone that contains water.

Baseline studies - Documentation on site and prior to mining, the vegetation species and cover, wildlife species and abundance, soil classes and depth, climate, historical and archeological sites or lands of unique value, presence of rare or endangered species, and environmental or other factors required by the administrative agency.

Commence to construct (construction) - Construction includes any clearing of land, excavation, or other action that would affect the environment of the site of any facility, but does not include activities incident to preliminary engineering or environmental studies.

Commence to construct underground (fracturing) - Relates to possible development of a facility, but not including the gathering of geological data by boring of test holes or other underground exploration.

Contamination - Impairment of the quality of state waters by sewage, industrial wastes, or other wastes creating a hazard to human health.

Contouring or original contour - Grading or backfilling the land affected to a terrain consistent with proposed future use or similar in nature to the terrain existing prior to the commencement of the mining operation.

Corridor - The general location of a transmission facility.

Critical habitat - A specific habitat characteristic which, if destroyed, would eliminate specific wildlife indigent and significant to the area. Examples: ponds for waterfowl or live streams for fish.

Date of seeding - The period of the year when seeding should be accomplished for the best chance of obtaining a successful stand. This is dependent upon the seasonal characteristics of precipitation and whether the species seeded and warm season or cool season.

Depth of seeding - The amount of soil coverage over the seed when planted. Optimum coverage is dependent upon seed size and soil texture.

Discharge - The volume of water flowing past a point per unit time.

Disposal system - A system for disposing of sewage, industrial or other wastes, and includes sewerage systems and treatment works.

Downstream states - States in the direction of flow of a stream.

Effluent standard - Any restriction or prohibition on quantities, rates and concentrations of chemical, physical, biological and other constituents which are discharged into the environment.

Emission - A release of air contaminants into the ambient air.

Emissions standard - A limitation on the release of any air contaminant into the ambient air.

Erosion control - Action taken to minimize both wind and water erosion on the areas involved.

Facility - Each plant or unit, or addition thereto, designated for a legal minimum amount of:

- a. Electrical generation; or
- b. Synthetic gas production; or
- c. Liquid hydrocarbon production; or
- d. Coal conversion, refinement, or utilization; or
- e. Electrical transmission; or
- f. Gas, water, or liquid hydrocarbon transmission; or
- g. Geothermal research use; or
- h. Underground coal gasification; or
- i. Uranium mineral enrichment; or
- j. Other energy conversion facility.

Facility, associated - Associated facilities include, but are not limited to, transportation links, aquaducts, diversion dams, storage ponds, reservoirs, transmission substations, and/or any other device or equipment associated with the production or delivery of energy, but not actually part of an energy facility.

Final cut - The last pit created in a surface-mined area.

Fuel burning equipment - Any furnace, boiler apparatus, stack, or appurtenances used in the process of burning fuel or other combustible material for the purpose of producing heat or power or indirect heat transfer.

Fugitive dust - Solid airborne particulate matter emitted from any source other than through a stack.

Garbage - Putrescible animal and vegetable wastes resulting from the handling, preparation, cooking and consumption of food, including wastes from markets, storage facilities, handling and sale of produce and other food products.

Ground water - Natural water occurring below the land surface.

Heat input - The aggregate heat content of all fuels whose products of combustion pass through a stack or stacks. The heat input value is the equipment manufacturers or designers guaranteed maximum input whichever is greater.

Highest previous use - Previous use of the land area which had the greatest economic and social value to the people of the area.

Highwall - Those sides of the pit adjacent to unmined land.

Impacted area - An area in which sudden or prolonged population growth may cause environmental, social, or economic stresses.

Incinerator - Any furnace used in the process of burning solid waste for the purpose of reducing the volume of the waste by removing combustible material.

Indirect air contaminant source - Any facility, building, structure, or installation, or any combination thereof, which can reasonably be expected to cause or induce emissions of air contaminants.

Industrial waste - Any waste substance from the process of business or industry, or from the development of any natural resource together with any sewage that may be present.

Modification - Any physical change in, or change in the method of operation of, an affected facility which increases the amount of any air pollutant (to which any state standard applies) emitted by any such facility or which results in the emission of any such air pollutant not previously emitted.

Monitoring - Periodic evaluation of environmental factors to determine the effect (if any) of the operation or changes occurring because of the operation.

Mulching - The placement of a material on the soil surface or creation of a soil condition which would decrease evaporation of soil moisture. Some mulching operations will also slow the erosive sources of wind and water. Common mulching materials include straw or hay, asphalt emulsion, wood fibers, excelsior mattings, etc.

Multiple chamber incinerator - Any article, machine, equipment, contrivance, structure or part of a structure used to dispose of combustible refuse by burning, consisting of two or more combustion furnaces in series physically separated by walls, interconnected by gas passage ports or ducts in employing adequate parameters necessary for maximum combustion of the material to be burned.

Nonpoint pollution - Pollution whose source is general rather than specific in location.

Noxious weed - Any weed species designed as noxious by the appropriate state agency - usually perennial and difficult to control.

Orphan mine - A mined-out area which had been abandoned prior to the enactment of land reclamation statutes where the owner or operator has no legal responsibility for reclamation.

Overburden - All of the earth and other materials which lie above (or between) mineral deposits in the original state or as it exists after removal from its natural state in the process of surface mining.

Particulate matter - Any material, except water in uncombined form, that is or has been airborne, and exists as a liquid or a solid at standard conditions.

Permit - A written warrant or license granted by one having authority.

Pit - A depression in the land surface created by the removal of overburden and mineral in the process of surface mining.

Point source - Any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or vessel or other floating craft, from which pollutants are or may be discharged.

Pollutant - Dredged spoil, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, chemical waste, biological material, radioactive material, heat, wrecked or discharged equipment, rock, sand, or any industrial, municipal or agricultural waste discharged.

Process weight - The total weight of all materials introduced into any specific emitting process which may cause emissions. Solid fuels charged will be considered as part of the process weight, but liquid and gaseous and combustion air will not.

Proposed use of reclaimed lands - The planned use of the reclaimed lands after reclamation has been completed.

Public water supply - Any water supply being distributed by service connections utilized to furnish water for human consumption either in preparing foods or beverages for inhabitants of residences or business establishments.

Rate of seeding - Pounds of seed per acre. Rate is determined by seed size and precipitation to which the area is subject. General recommendations are from 14 to 40 pure live seed per square foot. This may be too much in arid areas.

Reclaimed lands - Affected land which has been backfilled, graded, shaped, and revegetated or otherwise conditioned to make them suitable for any uses or purposes consistent with those enumerated in the reclamation plan.

Reclamation - The process of reconditioning or rehabilitating affected land to the useful purpose consistent with the approved reclamation plan.

Reduction - Any heated process, including rendering, cooking, drying, dehydrating, digesting, evaporating, and protein concentrating.

Refuse - Waste materials directly connected with the mining or milling activity. This may include overburden, reject minerals, mill tailing, fly ash, etc.

Reservoir - A pond, lake, tank, or basin, natural or manmade, used for the storage, regulation and control of water.

Riparian right - A right of those living or located on bank on a natural water course to access or use the shore, bed, and water.

Roughing land surface - Mechanical disturbance designed to leave the land surface in a rough condition to protect from excessive erosion and accumulate moisture. Common types of roughing include pitting, gouging, contour furrowing, etc.

Route - The specific location of a transmission facility within a designated corridor.

Rubbish - Nonputrescible solid waste consisting of both combustible and noncombustible wastes. Conbustible rubbish includes paper, rags, cartons, wood, furniture, rubber, plastics, yard trimmings, leaves, and similar materials. Noncombustible rubbish includes grass, crockery, cans, dust, metal furniture, and like materials which will not burn in an incinerator capable of reaching temperatures of 1600° F to 1800° F.

Scrubber - An air pollution control device that uses a liquid spray to remove pollutants from a gas stream by absorption or chemical reaction. Scrubbers also reduce the temperature of the emission.

Seeding techniques - Methods of seed application and coverage such as drilling, broadcasting and harrowing, hydro-seeding, etc.

Self-regenerating vegetation - Vegetation which is capable of reproducing itself over a long period of years and without artificially modifying the environment by such means as irrigation or fertilization.

Sewerage system - A device for collecting or conducting sewage, industrial wastes, or other wastes to an ultimate disposal point.

Site - The location of an energy conversion facility.

Slurry - A mixture of a liquid and solid. Slurries of water and coal are used in coal processing and transportation.

Small wastewater facility - Sewage system, disposal system, and treatment works for a single-family house, or a single mobile home unit.

Soil amendments - Materials added to the soil to change soil structure, texture, permeability, fertility or neutralize salts, acids or other toxic substances.

Soil survey - Identification and mapping of all soil material within the permit area as well as identification and location of those soil materials which can be used as suitable plant growth material.

Species selection - The determination of plant species and varieties to be introduced in the reclamation process. They must be adapted to the climate, soil, and proposed use of the site involved and should be self-regenerating.

Spoil - That part of the overburden lying between the subsoil and the mineral seam, or seams, and rejected minerals. This material is usually not suitable for supporting plant growth.

Spoil pile - A pile of spoil material prior to being graded, shaped, used as backfill material or topsoiled in preparation for reseeding.

Stack - A smoke stack; a verticle pipe or flue designed to exhaust gases and suspended particulate matter.

Stockpile stabilization - Techniques applied to stockpiles of either spoil or topsoil to minimize both wind and water erosion. Roughing the surface and planting of temporary or annual plant species, planning directional location of stockpiles, and piling with gentle slopes are common procedures recommended for stockpile stabilization.

Stream load - The quantity of solid and dissolved material carried by a stream.

Strip mining or surface mining - Mining of a mineral by removing the overburden above the mineral and removing directly the deposits thus exposed.

Suitable plant growth material - That portion of the soil material (usually the A, and in some cases, the B horizon) found to be acceptable by the soil survey for respreading over the surface of the regraded areas to provide a medium for acceptable plant growth.

Sulfur dioxide SO_2 - A heavy, pungent, colorless gas formed primarily by the combustion of fossil fuels. SO_2 damages the respiratory tract as well as vegetation and materials and it is considered a major air pollutant.

Surface water - Water on the earth's surface exposed to the atmosphere as rivers, lakes, streams, and oceans.

Topsoil - See suitable plant growth material above.

Topsoiling - Spreading of suitable plant growth material over the prepared spoil in preparation for revegetation of the area.

Toxic material - Material containing elements or compounds which, if within the root zone, would prohibit or inhibit normal plant growth or be absorbed by the plants in such quantity that the plant growth would be toxic to the grazing animal. Commonly excessive quantities of salts, acid generating pyrites, selenium, molybdimum, aluminum, or radioactive elements should not be within the root zone of the vegetation to be grown on the area.

Treatment works - Works installed for treating or holding sewage, industrial wastes, or other wastes.

Utility - Any person engaged in and controlling the generation, manufacture, refinement, or transmission of electric energy, gas, or liquid hydrocarbon products, including but not limited to, electric power generation or transmission, coal gasification or liquefaction, petroleum refinement, uranium enrichment, and the transmission of coal, gas, liquid hydrocarbon products, or water from or to any energy conversion facility.

Vegetation type - The kind of vegetation growing on the area. Usually designated or named according to the dominant (and sometimes the subdominant) species in cover or aspect.

Wastewater facility - Sewage system, disposal system, and treatment works.

Waters of the state - Any body of water, irrigation system, or drainage system either surface or underground.

Water pollution - The presence in water of one or more water contaminants in such quantities and duration as is or may be injurious to human health, welfare, or property, animal or plant life, or which unreasonably interferes with the enjoyment of life or property.

Water quality standard - A plan for water quality management, criteria to protect those uses, implementation and enforcement plans, and an anti-degradation statement to protect existing high quality waters.

Wildlife - All nondomesticated animals in the area. This includes not only the commonly accepted game animals, but small mammals, birds and aquatics such as fish.

BASE DATA ELEMENTS

I. Current status data (baselines)

   A. Atmospheric data

      1. Temperature data from nearest official recording station.
      2. Precipitation data from nearest official recording station.
      3. Air quality data from nearest official recording station.
      4. Wind data from nearest official recording station.
      5. Cloud data from nearest official recording station.

   B. Lithologic data

      1. Soils data from existing or specially-made maps.
      2. Geologic data including mineral resources from existing or specially-made maps and cross sections.

   C. Hydrologic data

      1. Surface water data from existing reports or specially-made studies (location, quantity, quality).
      2. Subsurface water data from existing reports or specially-made studies (location, quantity, quality).

   D. Biologic data

      1. Animal data from existing or specially-made studies.
      2. Plant data from existing or specially-made studies.

   E. Sociologic and geographic data

      1. Population data from existing or specially-made studies.
      2. Employment data from existing or specially-made studies.
      3. Land use data from existing or specially-made studies.
      4. Transportation network data from existing or specially-made studies.
      5. Esthetic values data from existing or specially-made studies.

II. Data on planned energy conversion plant or transmission system.

   A. Plant or transmission system type and design data.

   B. Location data, including alternatives.

  - C. Size data
    1. Plant size and production capacity data, or
    2. Transmission corridor width, length and capacity.
  - D. Input resources and facilities data
    1. Location, quantity, quality of input resources (coal, water, electricity, etc.).
    2. Type and location or mine-to-plant transportation network needed.
  - E. Work force data
    1. Construction force data.
    2. Operation force data.
  - F. Emission data (stack effluents, waste water, heat, radioactivity, etc.).
  - G. Plant or transmission system hazards (including accidents) and control data.

- III. Impact data
  - A. Probable impact on natural systems
    1. Probable effects of construction, including possible lowering of esthetic qualities.
    2. Probable effects of plant effluents on atmosphere, water (surface and subsurface), soils, plants, wild and domestic animals, and man (including esthetic values).
    3. Probable effects of hazards on wild and domestic animals and man.
    4. Probability of accidents and probable effects.
  - B. Probable sociological and geographic impact
    1. Probable employment impact (including displacements).
    2. Probable population impact (including displacements).
    3. Probable economic impact.
    4. Probable impact on social services (schools, hospitals, police, fire protection, etc.)
- IV. Plans for dealing with impact.